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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/759,053	01/12/2001	Henry H. Baker	60231-300402 INT1POO4A	3049
21912	7590	08/11/2004	EXAMINER NGUYEN, LUONG TRUNG	
VAN PELT & YI LLP 10050 N. FOOTHILL BLVD #200 CUPERTINO, CA 95014			ART UNIT 2612	
			PAPER NUMBER 11	
DATE MAILED: 08/11/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/759,053

Applicant(s)

BAKER ET AL.

Examiner

LUONG T NGUYEN

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6, 9, 10.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Information Disclosure Statement*

1. The information disclosure statement (IDS) submitted on 7/09/2002 and 3/15/2004 have been considered by the examiner except the followings references.

1/ Japanese Patent Application No. 05288532, Publication Date 11/2/93, submitted on 7/09/02.

2/ Isabella T. Lewis, "WFOV Star Tracker Camera," June 1991, SPIE Vol. 1478, OCI Applied Optics, Garden Grove, CA pp. 1-12, submitted on 7/09/02.

3/ Hye Sook Park et al., "Realtime Tracking System for the Wide Field of View Telescope Project," 1989, Lawrence Livermore National Laboratory, SPEI Vol. 1111, pp.196-203, submitted on 7/09/02.

4/ National Defense Research Committee, Optical Research Laboratory Havard University, *Spherically Symmetrical Lenses and Associated Equipment for Wide Angle Aerial Photography*, Contract No. OEMsr 474, 6/6/1946, submitted on 7/09/02 and 1/12/2001.

These references are not considered because the copies of these references are not provided, and these references were not submitted in the prior Application No. 08/989,202, now Patent US 6,693,666.

### *Drawings*

2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show "imager 14b in Figure 2" as described in the specification, page 12. Any structural detail that is essential

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for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

3. Claims 1-5 are objected to because of the following informalities:

Claim 1 (line 30), “the imaging surface” should be changed to --the imaging surface of the second imaging device--.

Claim 5 (line 2), “the alignment mechanism” should be changed to --an alignment mechanism--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 (line 25) recites the limitation "the" in "the focal plane". There is insufficient antecedent basis for this limitation in the claim.

Claims 2-5 are rejected as being dependent on claim 1.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipton et al. (US 5,142, 357) in view of Toops (US 5,206,503).

Regarding claim 1, Lipton et al. discloses a moving imager camera, comprising a first imaging device (image sensor 20, figures 5a-5d, column 7, lines 1-13); a first lens (lens 16, figures 5a-5d); a second imaging device (image sensor 22, figures 5a-5d, column 7, lines 1-13); a first lens (lens 18, figures 5a-5d).

Lipton et al. fails to specifically disclose a first position mechanism capable of three-dimensional movement, the first imaging device being mounted upon a surface of the first position mechanism such that the first imaging device moves in concert with motion of the surface of the first positioning mechanism; a first measurement system to determine a position of the first imaging device within an external frame of reference defined by three axes X, Y, and Z; the field of the coverage of the first lens being larger than the optically sensitive area of the imaging surface; a second position mechanism capable of three-dimensional movement, the second imaging device being mounted upon a surface of the second position mechanism such that the second imaging device moves in concert with motion of the surface of the second positioning mechanism; a second measurement system operable to determine a position of the second imaging device in the focal plane; the field of the coverage of the second lens being larger than the optically sensitive area of the imaging surface.

However, Lipton et al. discloses image sensors 20 and 22 are mounted on the shaft 28 and movable (figures 5a-5d, column 7, lines 1-14). And Toops discloses X-Y translational imaging device, which comprises sensor 42 (figure 1, column 5, lines 1-25); lens 10 (figure 1, column 4, lines 25-68). Toops discloses sensor 42 moves in the focal plane 30 and along the optical axis of lens 10 and could be positioned in imaging planes 38 or 40 (column 4, lines 25-67). This indicates that the device inherently includes a position mechanism and measurement system to move and locate the position of sensor 42. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Lipton et al. by the teaching of Toops in order to provide a tracking optical system, in which the focus

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coverage area projected from the objective is much greater in area than the area of the sensor (column 2, lines 5-8, 27-30).

Regarding claim 2, Toops discloses a control system operable to control motion of the first and second position mechanism (microprocessor, column 10, lines 1-5).

Regarding claim 3, Toops discloses first controller and second controller (microprocessor, column 10, lines 1-5).

Regarding claim 4, Lipton et al. discloses an alignment mechanism operable to align the first and second imaging devices into substantially the same plane (shaft 28, figures 5b-5c).

***Allowable Subject Matter***

8. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 5, the prior art of the record fails to show or fairly suggest a moving imager camera comprising an alignment mechanism includes a laser diode disposed within the first positioning mechanism and aimed at a mirror disposed within the second position mechanism, and a light sensor disposed within the first position mechanism, such that when the first and second positioning mechanisms are aligned into substantially the same plane, a beam of

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light generated by the laser diode will reflect off the mirror and return for measurement and optimization at the light sensor.

### *Conclusion*

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yamazaki (US 4,067,027) discloses binocular telescope containing a camera.

Robinson (US 4,751,570) discloses generation of apparently three-dimensional images.

Miura et al. (US 4,879,596) discloses stereoscopic camera apparatus which incorporates cameras and can commonly adjust directions of the cameras.

Kelly (US 5,861,994) discloses modular binocular electronic imaging system.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUONG T NGUYEN whose telephone number is (703) 308-9297. The examiner can normally be reached on 7:30AM - 5:00PM.

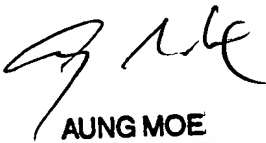
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LN LN  
8/7/04

  
AUNG MOE  
PRIMARY EXAMINER